

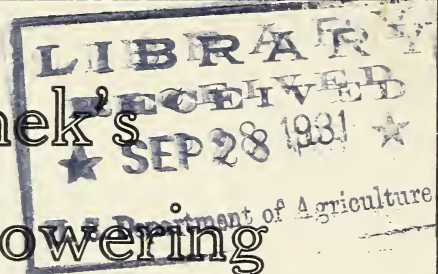
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Will H. Tracy

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Zvolanek's Winter Flowering Sweet Pea Seed



PRICE LIST

Anton C. Zvolanek
ORIGINATOR

Bound Brook,

New Jersey, U. S. A.



ANT. C. ZVOLANEK

Will H. Tracy, Jr.

SWEET PEAS

GREENHOUSE CULTURE IN WINTER

Soil Preparation

Winter Flowering Sweet Peas will grow in almost any kind of good sweet soil.

Grow them in the highest and lightest houses you have. Solid beds, with 18 inch to 30 inch depth of good loose soil, with about one-fourth of short cow manure, well mixed, is the proper portion. Be sure your solid beds are well drained; if you have ground water raise the beds at least 12 inches so that the soil will remain steadily sweet.

Renew your soil at least every two years, it will pay for the extra work in one week's cutting. Sweet Peas cannot be raised with success in the same soil more than two years, excepting you follow with Tomatoes, which seems to be the only plant which leaves the right deposits for Sweet Peas again.

SOWING

When your beds are prepared, and the soil friable, with the hose, or, better, the lawn sprinkler, soak the beds thoroughly so that they be wet down to their base. In one or two days the surface of the beds, down to three inches, will be just right to work. Rake them off and you are ready for sowing, assuring yourself the soil is not too sticky. Sow from one to one and a half inches deep.

If your rows run from east to west they should be at least five feet apart, but if from north to south, then three feet. Sow your seed in the rows one inch apart and, later, thin out so that the plants will stand about three inches apart in the row.

After sowing, provided the soil has been soaked right to the bottom, it will be unnecessary to give further water for probably over one week; as long as the soil is moist three inches below the surface, all water should be withheld. This will cause the roots to go deep in the ground where it is cool and will provide the conditions they want in order to start right. Many growers make the mistake of sowing sweet pea seed in dry soil and watering afterward. When there is not enough moisture below, the roots will remain on the surface, and the first hot

day the sun will burn or cook them, causing the plants to damp off. Should the soil really dry out and water become necessary, apply it only between the rows and away from the plants, but be sure to give enough water so that it reaches the lowest part of the soil.

WHITE SEEDED PEAS

such as Florence Denzer, should be soaked for ten hours in water and scattered on flats until the seed begins to swell, which will be in one or two days, according to the temperature. The seed should then be sown in the beds and not watered until the seedlings have reached a few inches in height. If dry seed is watered right after sowing very few will grow.

INSECTS

After sweet peas have begun to make growth, look over the plants carefully each day for insects. The first of these pests to appear is generally the **green fly**. This is the worst enemy of sweet peas. Sometimes they appear when the plants are only an inch in height, laying their eggs in the center of the young shoots, thus weakening the plants from the start. Fumigating with nicotine paper during cool nights, or syringing with nicotine when it is warm, will check the insects if the remedies are applied in time. However, the fight must be begun from the start to prevent the green fly from getting a foothold. If no attention is paid in time, many plants will turn yellow and die, many others will produce streaky foliage and such plants produce usually streaky and very weak flowers.

Mildew is very dangerous if not checked at once. As soon as you notice the first, cut all the flowers and *dust* with Hammond's **Grape Dust**. I have found this the best preparation for sweet peas. After two days syringe it off.

Red spider will sometimes appear on sweet peas, especially early in the Fall. Syringing with the hose will eradicate this pest.

VENTILATING AND TEMPERATURE

After the seed has been sown, keep the house as cool as possible, admitting air day and night as long as the weather will permit and frost is kept out. The cooler the plants are started the stronger and healthier they become.

After the first buds can be felt the temperature must be raised to 45 degrees F., at least, during the night, and from 10 to 15 degrees F. higher in the daytime. As soon as the flowers begin to open 50 degrees F. at night and from 60 to 70 degrees in the daytime must be maintained. At the same time see that plenty of ventilation is given. If the plants are grown too cool when they are in flower many of the buds will drop, the flowers will not open fully and the color will fade.

SUPPORTING

After the plants have reached the height of 6 inches, supports must be given. The best method of supporting is to run one wire on the bottom and one from 8 to 10 feet above each row, connecting these two wires with strings as is done in the case of smilax. Strings should also be run lengthwise the row, every 10 inches, to assist the plants to climb.

HEIGHT

Almost all of my Winter Flowering Sweet Peas, when well cultivated, will begin to bloom after they have reached the height of 3½ feet, and will continue to do so until the height of from 8 to 12 feet has been attained and in some instances even higher. The taller the vines grow the better will be the plants and the larger the number of flowers that will be produced.

TIME TO PLANT

A few years ago I recommended to sow seed for a Christmas crop the first of September. Meantime, all varieties of the sweet peas have been improved in size of flower, length of stem, as well as in height, all of which necessitates a longer season of growth. If a good crop for Christmas is wanted, sow the seed the 20th of August. If sown the first of September the plants will flower in January, and this is the most profitable crop. If sown on September 15th the main crop will be in February, and if sown in October the crop will come in March. A November sowing will yield a crop from latter part of March on;

by sowing in December you will obtain flowers the first of April, and from a January sowing in April to May; by a February sowing from the first of May and by a March sowing from May to June.

These sweet peas can be grown successfully outdoors in Summer. From seed sown in June the plants will bloom in August, after the old late varieties have gone. If sown not later than July 15, a good crop will be produced toward the end of August or September.

Winter Flowering Sweet Peas, when the seed is sown after December 15th, seldom reach over 6 feet in height and can be planted closer. Outdoors these seldom grow much over 4 feet.

The following notes on cultivation are by that most successful grower of sweet peas, Mr. William Sim, Cliftondale, Mass., and are extracted from a paper read by him before the Gardeners and Florists' Club of Boston on April 21, 1908:

“ To grow the sweet pea to perfection under glass you must have a greenhouse suitable for the purpose. It should be at least eight feet high on the sides, four and a half feet being glass. My houses are seven feet, and I find the side rows strike the glass when the vines are about half grown, thereby giving me half a crop. My center rows are about right; they are twelve to fifteen feet high. The higher the vines grow the more and better flowers you get. We plant the rows five feet apart and in a line with the supports of the greenhouse. The uprights are twelve feet apart, so in supporting we run twine from one support to the other on each side of the row. This I have found the best method of supporting. I have tried wire netting; it is only a nuisance, as the vines do not cling to the wire, which causes just as much tying as if it were not there. It also causes injury many times to the vines, as a sweet pea stretches many times more than a foot in developing; if held back by anything in growing the growth looks like a spiral spring, and the picking of the blooms is made very difficult. The side rows are planted five feet from the sides of the house; and all the heating pipes are on the sides. The vines are very susceptible to red spider and as they will not stand syringing, the further you can afford economically to have them from the pipes the better.

“ We have not changed the soil in the houses since they were built four and five years ago, and we find the vines are getting more vigorous

each year. In the same soil a crop of tomatoes and of violets is harvested each year. The soil was originally eighteen inches deep, but by the application of manure each year the depth is now two and a half feet. The tomato crop is on the wane the middle of August. When these are cleaned out we trench the house over as deep as the soil, bringing the bottom soil to the surface. In the bottom of the trench we put three inches of decomposed cow manure; one foot from the surface we put on three inches more of the same material. The house is allowed to remain in this state until nearly time for sowing the seed. The soil is then usually very dry, so we dampen it down enough to cling together while the house gets another forking over. This time we go down one foot and mix the top layer of manure with the surface soil. We then make the surface as nearly level as possible and thoroughly water the soil, giving enough to penetrate the entire mass, with a strong dose of liquid horse manure. In about three days, depending on the weather, the house will be ready to plant. We sow the seeds about one and a half inches apart. We make the drills one inch deep and do not allow more than one inch of soil over them. We do not pull any more soil toward the roots, as is often recommended, but let it remain level. If more soil is pulled around the base of the plant stem-rot is sure to follow. We do not water the plants again until they are up about three inches.

“Of course, you can grow them on a bench with a few inches of soil, but the results will be just what you make them—a weak growth and a crop of short-stemmed flowers. These soon play out, as there is not enough soil or food for the vines to live on.

“They may be made to flower any time you wish by increasing the temperature, but the best results are obtained by growing at a temperature just above freezing until the buds can be felt in the crowns of the plants. Then the temperature should be gradually increased, say one degree a night, until you reach 48 degrees. This, I think, is about right, although in Midwinter I think they move a little better at 50. As the days lengthen a little cooler temperature seems to suit better. A rise of 10 to 15 degrees should be given during the day in sunny weather. In spells of cloudy weather 55 degrees is high enough during the day. If a high temperature is given in dark weather the growth gets soft and wilts when the sun comes out bright again. While the plants are young they should be regularly fumigated so that there will not be a sign of lice when the plants commence to flower. If they

are clean at this stage it will not be necessary to fumigate while they are in bloom. It is impossible to sell sweet peas that smell of tobacco. Tobacco also bleaches the flowers of some varieties, and makes them look like some other variety.

"We sometimes hear of someone having trouble with the buds dropping. This is more the case in Midwinter than at any other time, and is caused by a too cool temperature or a sudden chill, or too much water. Should a house be allowed to go near the freezing point in Midwinter the wholesale dropping of buds will be sure to follow.

"Diseases have not shown themselves with us. Sometimes we see a plant that looks stunted, with yellow streaks in the foliage; this we have attributed to too rich soil or the roots striking manure that was not thoroughly decomposed. They take an abundance of water in the flowering season, but require very little in the early stages of their growth. They should be provided with proper drainage so that if too much water is given it will settle into the subsoil, and no bad results will follow."

This gentleman has no doubt raised the best sweet peas that have ever been seen anywhere, and I thoroughly recommend his methods.

A. C. Z.

Novelties

MRS. A. FARENWALD. This variety is one of the largest size; standard and wings clear, dark pink and of the semi-orchid type; first of the new Winter crop. It is not quite fixed, but is throwing some new breaks, of the same size, in rose-orange and a few lighter colors, but all these are of the best commercial value. Here is a letter from one of the most successful Sweet Pea growers, who has seen this variety in bloom.

Price: Pkt. \$1.00, oz. \$2.00.

MRS. JAMES WHEELER. Of the Unwin type; very pleasing salmon with orange tint. This variety will outclass any of its color.

WINTER CHEER. Pure white, of the Unwin family; slightly wavy and large.

BLUE JAY. Light blue, of the improved grandiflora type; ready about September.

ORANGE BIRD. Orange-rose, grandiflora type, producing four flowers to the stem when well grown. One of the best commercials

IMPROVED ENCHANTRESS. Beautiful clear light pink of the Unwin type; finest bloomer during the darkest December days until Spring.

Price: Trial pkt. 50c., oz. \$1.00.

ZVOLANEK'S PINK. Extra large extended flower, soft pink self; similar to Mrs. Farenwald, only lighter. This is a winner.

Price: Trial pkt. 50c., oz. \$1.00, lb. \$12.00.

Mt. Airy, Md., Feb. 26, 1912.

Mr. A. C. Zvolanek,

Dear Sir: We have been cutting very fine Peas this season from your stock; stems are 18 and 20 inches long with three, four and five flowers, and in several instances, six flowers to the stem.

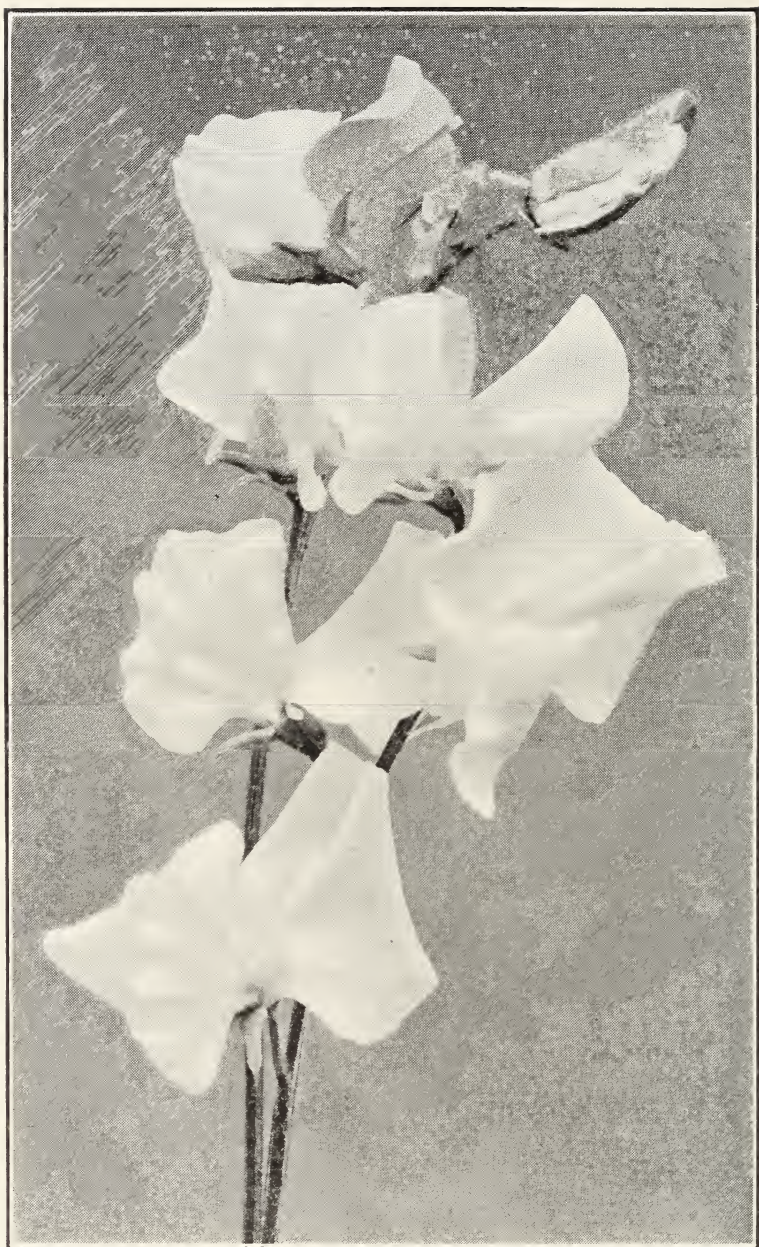
You deserve and receive great honor from the trade for bringing Winter-flowering Sweet Peas to their present high position in the market. You have already done more for the florist than the great Burbank will ever do.

I have just returned from a visit to the large growers of New England, and among others visited Wm. Sim of Cliftondale, Mass., and A. Farenwald, Roslyn, Pa., and what I saw enthused me more than ever. I did not see any better Peas than we are cutting here, but better methods, and I saw some new stock at Farenwald's that pleased me very much. A new pink, one of the Spencer type, Mrs. Farenwald, is certainly beautiful; I think it the finest of them all. It was not quite so long-stemmed, but as it was in a warm corner, I judge it will be longer if grown cooler. I would like very much to try it.

Wishing you success and happiness, I am,

Yours respectfully,

JESSE P. KING.



ORCHID and UNWIN WINTER-FLOWERING MIXTURE

This mixture contains most of the newest Orchid and Unwin Winter-flowering Sweet Peas; over 50 selected varieties not in commerce yet. I am introducing this mixture merely to show my costumers what I will have for next year, as the best of it will be offered in separate colors soon. Do not fail to try a packet. **Price: Pkt. \$1.00, oz. \$2.00.** Sold only to bona-fide growers. One trial packet will be sent **free** with any \$5.00 order, but only to a **florist**. I may probably have several other Orchid and Unwin novelties to offer, but at this time it is hard to say which will produce the most fixed seed.

Older and Extensively Grown Commercial Varieties

CHRISTMAS PINK. Pink and white.

FLORENCE DENZER. Pure white.

The above two are splendid commercial varieties.

WATCHUNG. Pure white; black-seeded. **PINK WATCHUNG.**

Pink and white.

These two varieties are three weeks earlier than the preceding, but not so tall. They are specially adapted for the darkest Winter months.

MRS. ALEX. WALLACE. Lavender.

MRS. CHAS. H. TOTTY. Sky-blue or lavender.

Price: Oz. 30c., $\frac{1}{4}$ lb. 75c., lb. \$2.00.

WALLACEA. Lavender; almost the same color as the former but much larger.

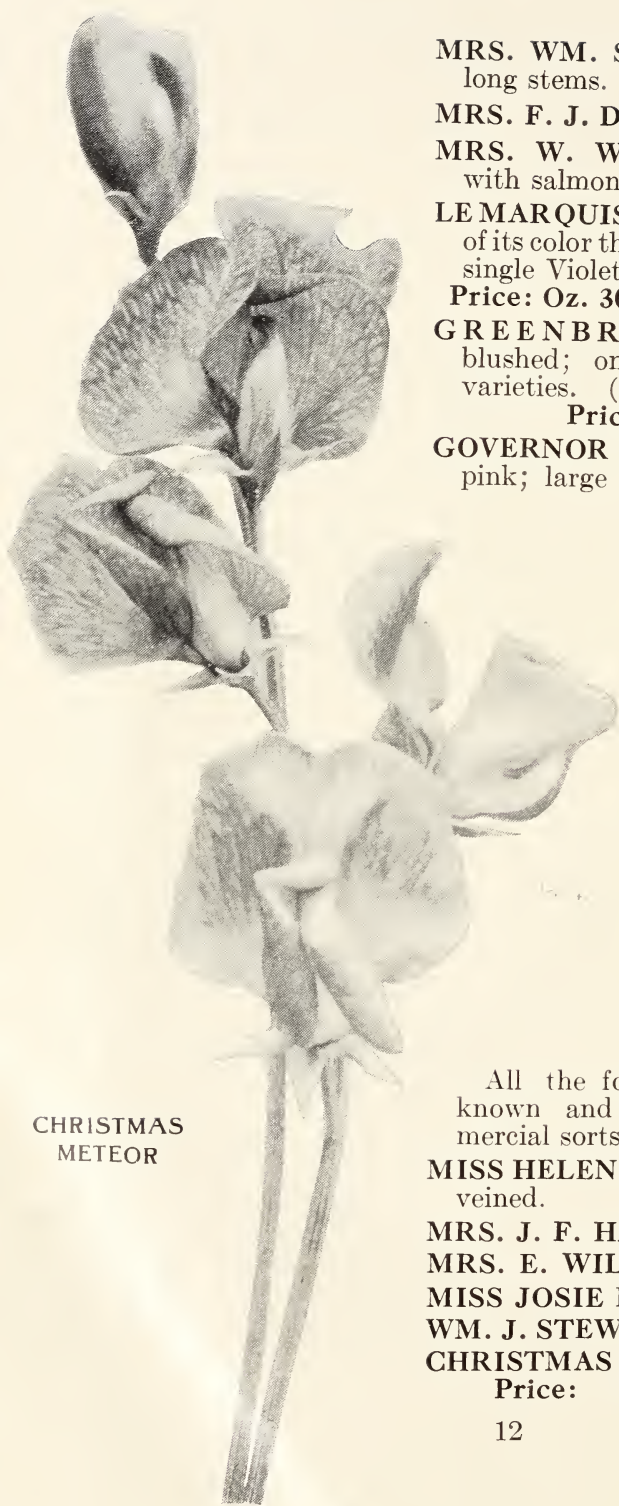
Price: \$3.00 per lb.

PINK BEAUTY. Very large; rose-pink in Winter, with an orange tint in Spring and during bright days. This is one of the best commercial sorts, and I have been unable to catalogue the same for some time, as all growers have taken it up before it has been harvested. It sells at sight, especially toward Spring. I am afraid it will be oversold again this year. Send your order in time.

Price: Oz. 50c., lb. \$5.00.



PINK BEAUTY



CHRISTMAS
METEOR

MRS. WM. SIM. Salmon pink; extra long stems.

MRS. F. J. DOLANSKY. Soft pink.

MRS. W. W. SMALLEY. Soft pink with salmon.

LE MARQUIS. Navy blue. On account of its color this variety has often replaced single Violets.

Price: Oz. 30c., $\frac{1}{4}$ lb. 75c., lb. \$2.00.

GREENBROOK. White, lavender blushed; one of the best commercial varieties. (Crop short)

Price: \$3.00 per lb.

GOVERNOR FORT. Clear salmon-pink; large flowers, but in most cases with but two flowers to the stem. Crop very short; can spare only small quantity to each customer. (Almost oversold)

Price: Oz. 50c., lb. \$8.00.

CHRISTMAS METEOR. Fine red.

JACK HUNTER. Yellow.

Price: $\frac{1}{4}$ lb. 75c.

MRS. GEO. LEWIS. White; wavy. (Crop short.)

Price: Oz. 30c., 2 oz. 50c., $\frac{1}{4}$ lb. 75c., lb. \$2.00.

All the foregoing varieties are well known and have proven good commercial sorts.

MISS HELEN M. GOULD. White; lilac veined.

MRS. J. F. HANNAN. Rose.

MRS. E. WILD. Carmine.

MISS JOSIE REILLY. Lilac; large.

WM. J. STEWART. Self blue.

CHRISTMAS CAPTAIN. Purple.

Price: Oz. 25c., $\frac{1}{4}$ lb. 75c.

Late or Summer Flowering Orchid Sweet Peas

In 1902, one year after the first Orchid or Spencer Sweet Peas were introduced by Silas Cole in England, a friend of mine, an English Sweet Pea enthusiast, sent me a small packet of about 70 seeds of the famous strain, Countess Spencer. In May, 1903, the first flower of this strain opened in my greenhouses, and I realized at once that the work of Silas Cole must be written in golden letters in the history of Sweet Peas. Mr. Cole was the first to show us such a splendid flower, and Sweet Pea lovers must be thankful to him for it. As soon as I saw the first opened flower, I recognized the merit of the strain and began to cross the same with my Winter-flowering strain. After nine years of hard work, I changed all the best colors of the Late Spencer into Winter-flowering, and inside of one year at least 50 varieties will be before the public. From the original seventy seeds which I obtained from my English friend, under the name Countess Spencer, I obtained nine distinct varieties of the same type. As the original seed was not fixed, and each variety, the following year, produced many breaks, inside of three years I have counted over 60 without any crossing. Several of the best colors I have re-selected, at first merely for crossing of the Winter type. By accident, a part of the late re-selected Spencer hybrids were mixed up with part of my Winter seed and were not recognized until they were in bloom. Most of these mixed seeds went to my customers around Chicago and Milwaukee, and the commission men, not knowing the right name, christened it Butterfly; since that time (1905) most of the Western growers have used this name for Spencer.

I have now re-selected only a very few of the original Orchid or Spencer late varieties, but they cannot be replaced with any other in their color for florist purposes, even if you pay 25c. for three single seeds, as I did.

I have the following varieties:

Original Countess Spencer. Clear pink.

Lavender Spencer. Similar to Flora Norton.

Orange Spencer.

Apple Blossom Spencer.

Blanche Ferry Spencer. Pink and white.

White Spencer.

Scarlet Crimson Spencer. Similar to Glory of Paris.

Light Pink Spencer.

Rose Pink Spencer.

Price: \$3.00 per lb.

Orange-Salmon Spencer. One of the best commercial varieties, and, I believe, entirely new. Of the largest size.

Price: \$2.00 per oz.

All the true Spencer varieties are the poorest seeders and generally yield only one-fifth in comparison with others; consequently, the price will never be any lower for the well re-selected seed.

Unwin or Improved Grandiflora Types

Gladys Unwin. Light pink.

Frank Dolby. Best lavender.

Nora Unwin. The best white.

Price: \$1.25 per lb.

Improved Gladys. Rich pink.

Improved H. Lewis. Orange-rose.

Price: \$2.00 per lb.

Grandiflora Varieties

Blanche Ferry. Pink and white.

Lady Hamilton. Lavender.

King Edward VII. Crimson.

Queen Alexandra. Scarlet.

John Pierce. Lavender mottled.

Price: 75c. per lb.

All Winter and late Sweet Pea seeds are raised under my personal supervision. I am with them from the sowing of the first seeds until the harvest, and spare neither time nor money to obtain only the best.



Small Flower Seeds

ALL CALIFORNIA GROWN

PRICE LIST

	Per oz.
ALYSSUM, Little Gem.....	\$0.30
ASTERS, Semple's Branching, Mary Semple.....	1.00
Semple's Branching. Pure white.....	1.00
Semple's Branching. Rose.....	1.00
Semple's Branching. Light blue.....	1.00
Queen of the Market. Pure white.....	1.00
Queen of the Market. Flesh color.....	1.00
Queen of the Market. Blue.....	1.00
Vick's Branching. Pure white.....	1.00
Comet Branching. Rose, Freedom	1.00
CANDYTUFT, Empress. Long heads of white.....	.50
Giant Hyacinth-Flowered. White.....	.50
Lilac.....	.25
Dwarf Empress. White.....	.40
CARNATION, Chabaud's Everblooming, Double Mixed, and Giant Malmaison.....	1.00
CENTAUREA Imperialis. Pure white.....	1.25
COSMOS, Dwarf Early-Flowering Dawn.....	.50
DAISY, Shasta. Re-selected; extra large.....	1.50
ESCHSCHOLTZIA alba. Pure white.....	.40
Carminea.....	.40
Golden West.....	.40
Carmine King.....	.90
MIGNONETTE (Zvolanek's Stock). One of the best for fore- ing and outdoor.....	.75
NASTURTIUM, Tall Vesuvius.....	.20
Black Prince.....	.20
Variegated-Leaved Queen.....	.20
Lobbianum Lucifer.....	.20
Lobbianum Spitfire.....	.20
Hybrids of Madame Gunther.....	.20
Tom Thumb Aurora.....	.20

NASTURTIIUM—Continued.		Per oz.
Tom Thumb Chameleon		\$0.20
Golden Midnight.....		.50
Empress of India.....		.20
King Theodore.....		.20
Tom Thumb. King of Tom Thumbs.....		.20
Tom Thumb. Prince Henry.....		.20
Queen of Tom Thumbs. Brilliant.....		.20
Tom Thumb. Ruby King.....		.20
Tom Thumb. Vesuvius.....		.20
Tom Thumb. Fine Mixture.....		.15
POPPY, Miss Sherwood.....		.50
Shirley.....		.50
Tulip, Glaucum. Scarlet. Fine for forcing in greenhouses.		
Good seller.....		.50
PHLOX Drummondi grandiflora. Choice mixture.....		.50
STOCKS, Queen Alexandra. Rosy lilac		1.00
Beauty of Nice		1.00
Princess Alice		1.00
VERBENA, Defiance. Scarlet		1.75
Purple and blue shades		1.75
Rose and pink		1.75
Extra choice mixture.....		.75
ZINNIA, Scarlet. Brilliant vermillion.....		.25
White Victoria. Pure white.....		.25
Extra Double. Fine mixture.....		.25
Dwarf Double Pink.....		.25
Curled and Crested. Best mixture.....		.25

Ask for special prices on one-pound lots or more. I can supply any small flower seed, not included in this list, which can be grown in California, as I am in close touch with the most careful flower-seed growers in that State.